



Montana Fish, Wildlife & Parks

March 2, 1998

1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
 Fisheries Division
 Endangered Species Coordinator
 Nongame Coordinator
 Missoula Office
Montana State Library
MT Environmental Information Center
Montana Audubon Council
Mineral County Conservation District
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
U.S. Forest Service, Lolo National Forest
Montana State Library, Helena
State Historic Preservation Office, Helena
Watershed consulting, LLP

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for a Future Fisheries Project tentatively planned to restore stream channel stability and fish habitat in the lower reach of Big Creek located near the town of Haugen.

Please submit any comments that you have by 5 P.M., April 1, 1998 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. If you have any questions, feel free to contact me at (406) 444-2432.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division

Mineral

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Big Creek Restoration Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 which directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purposes of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. This project is being proposed to restore stream stability and fish habitat on the lower reach of Big Creek near the town of Haugen. This reach of stream shows evidence of diking, straightening and rip-rapping that has resulted in accelerated bank erosion, an over widened channel and degraded fish habitat.

- I. Location of Project: This project will be conducted on Big Creek near the town of Haugen within Township 19 North, Range 30 West, Section 26 in Mineral County.
- II. Need for the Project: Department Goal A indicates that a Fisheries Division objective is to "protect existing aquatic habitat and improve degraded stream systems for the welfare of healthy fish populations and other wildlife species and for public enjoyment and use." The Future Fisheries Improvement Program is a tool to help achieve that objective.

The channel of lower Big Creek is unstable due to past anthropogenic activities including manipulation of the riparian vegetation, channel straightening, diking and rip-rapping. This instability has resulted in an over widened stream channel and the degradation of fish habitat. This proposed project would stabilize the stream channel by restoring the riparian vegetative community, decreasing the width/depth ratios of the channel and re-establishing a stable channel sinuosity. Big Creek contains bull trout and westslope cutthroat trout and has been identified as a bull trout core area by the Montana Bull Trout Restoration Team.

III. Scope of the Project:

The project calls for stabilizing lower Big Creek by restoring appropriate stream channel dimensions (width depth ratios, bankfull channel width, sinuosity), using a series of natural material revetments (rootwads) to stabilize erodible banks, installing floodplain grade controls and re-establishing a healthy riparian vegetative community. Proposed stream channel dimensions would be copied from dimensions found on a healthy vegetated reach of stream. Approximately 15 sites on the stream channel have been identified for bank stabilization using a series of rootwad placements. Restoring the riparian vegetation would be accomplished through extensive plantings of native trees, shrubs and grasses. This project is expected to cost \$42,600.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$19,600.00.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Re-establishing a stable stream channel would act to reduce sediment inputs from erodible banks; provide greater cover and pool habitat by ensuring continued recruitment of woody debris to the active channel; and improve stream side shading through restoration of the riparian vegetative community. Habitat for riparian dependent wildlife would also be improved through restoration of the riparian vegetative community. Expected improvements in spawning habitat and improved access to habitat found in the upper watershed should enhance fish populations.

2. Water quantity, quality and distribution.

Short term increases in turbidity will occur during project construction. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the stream channel will be minimized to the extent practicable. A permit for a short term exemption from turbidity will be obtained from the Water Quality Bureau and a 310 permit will be obtained from the local Conservation District. In the long term, measures used to stabilize lower Big Creek would reduce the sediment contribution to downstream areas, thereby improving the overall quality of downstream waters.

3. Geology and soil quality, stability and moisture.

No effects on geology and soils are expected above the high water mark. Below the high water mark, the project is expected to stabilize the stream channel by restoring channel form and the riparian vegetative community.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover would be improved by stabilizing the stream channel and by extensive revegetation efforts through planting of native trees, shrubs and grasses.

5. Aesthetics.

Aesthetics will be enhanced by restoring an unstable reach of stream to a healthy and more natural stream environment by using channel dimensions taken from an undisturbed reach of stream and by re-establishing a healthy riparian vegetative community.

9. Historic and archaeological sites

The proposed project will likely require an individual Army Corp of Engineers (COE) 404 permit. Therefore, the State Historic Preservation Office has been contacted to

determine the need for compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment.

7. Access to & quality of recreational activities.

It is anticipated that the recreational fishery in both Big Creek and the St. Regis River would be improved by reducing sediment inputs into the stream channel, improving access to high quality habitat found in the upper watershed and encouraging the creation of pool habitat through natural processes. The recreational experience for anglers should be enhanced because of greater recruitment of trout due to improved spawning conditions and overall better habitat.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, the lower reach of Big Creek will remain unstable. This ongoing instability will result in continued bank erosion, excess sediment loading, channel aggradation and loss of channel capacity. Channel instability would tend to encourage private landowners to use inappropriate methods, such as diking and channel straightening, in an attempt to protect property. These techniques have been used in the past and have been proven to be ineffective and cumulatively harmful.

2. The Proposed Alternative

The proposed alternative is designed to stabilize eroding banks, restore channel capacity and re-establish a healthy riparian vegetative community. Restoration of the channel to a more natural stream environment would reduce sediment inputs to downstream areas, maintain large woody debris and associated pool habitat, and re-establish riparian vegetation. This alternative would improve fish and wildlife habitat, aesthetics and water quality within the project area.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement program. The proposed project also will be

reviewed by the Fish, Wildlife and Parks Commission and will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on the Montana Electronic Bulletin Board.

3. Duration of comment period?

Public comment will be accepted through 5 P.M. on April 1, 1998.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
Montana Department of Fish, Wildlife and Parks
1420 East 6th Avenue
Helena, MT 59620

Telephone: (406) 444-2432

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Big Creek Restoration Project

Division/Bureau Fisheries Division -Future Fisheries Improvement

Description of Project The project is being proposed to restore stream stability and fish habitat on the lower reach of Big Creek located near the town of Haugen. This reach of stream shows evidence of diking, straightening and rip-rapping that has resulted in accelerated bank erosion, channel aggradation, and degraded fish habitat.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats		X				X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources				X		
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping

jurisdiction Mineral County Conservation District, NRCS, Army Corp of
Engineers

Individuals or groups contributing to this EA Watershed Consulting,
LLP

Recommendation concerning preparation of EIS No EIS required.

EA prepared by : Mark Lere

Date: March 2, 1998